The Milwaukee Radio Amateurs' Club Inc.

Repeater Control Notes

5/31/01 4:41 PM

Telephone Control Operators-
Nick Broncatti KA9LUW
* Dave DeFebo WB9BWP – 414-449-7429 days
Kate Kedney KA9MWT
* Matt Planning KB9PRC – 414-449-6034 days
Tom Sherlowsky N9UFJ
* Mark Tellier KB9ZHX – 414-449-6291
Jim Tromblay WB9LNU
Jerry Wahlen WA9CGE
* Denotes possibly at repeater site during normal, weekday, daytime working hours

ICOM repeater defaults to PL decoder enabled when powered up. With an external controller connected to the repeater PL control is handled by the controller. To have PL on requires the pushbutton switch on the repeater be in and then a controller command issued. The switch will normally be left in, meaning PL on or off will be handled by the controller. Without an external controller, the repeater controls PL by itself (using the pushbutton switch). Currently PL is off. Turning it on seems to change a number of configuration parameters (beep, hang time, voice and more). The PL frequency (127.3 Hz) is set by dip switches inside the repeater itself. It will probably be turned on by summer.

Telephone number: 414-449-7442 **DO NOT GIVE THIS NUMBER TO ANYONE!** (the board will approve all control operators). Also do not give out the unlock code or command code prefix (all under penalty of death). The telephone rings 6 times (it is shared with a telephone in the passenger elevator control room, meaning it could be answered by some maintenance or service personnel, but that possibility is rare). Controller will answer the telephone and respond with something like "Welcome, please enter code sequence" you then have 30 seconds or so to enter a command. Entering any valid command lengthens the timer for more command entry. When finished with the call, enter ## (2 pound signs) and then the controller will respond with "Call complete" and the time. You can then hang up (wait for the message to be sure the repeater received the commands). If nothing happens over the telephone, the controller will hang up after a brief time (30 seconds – 2 minutes, depending on how it feels). In order for telephone commands to be functional Reverse Patch Mode 0 must be activated. See manual.

Local Control: For local controller control, flip control toggle switch up, enter touch tone commands on the attached keypad (no # suffix needed like over the telephone) and immediately flip control toggle switch down. The controller will speak the command response over the repeater transmitter (have a radio handy to hear) when the switch is flipped down (do this quickly). For telephone control, the control toggle switch must be down (otherwise telephone will answer but codes will be ignored).

Controller unlock code: 4930017824 (for major programming)
Controller lock code: ##
Unlock the controller for major programming like messages or just a long combination of commands.
The unlock code can only be changed by opening up the controller, changing a dip switch and entering commands from a local keypad and then resetting the dip switch.

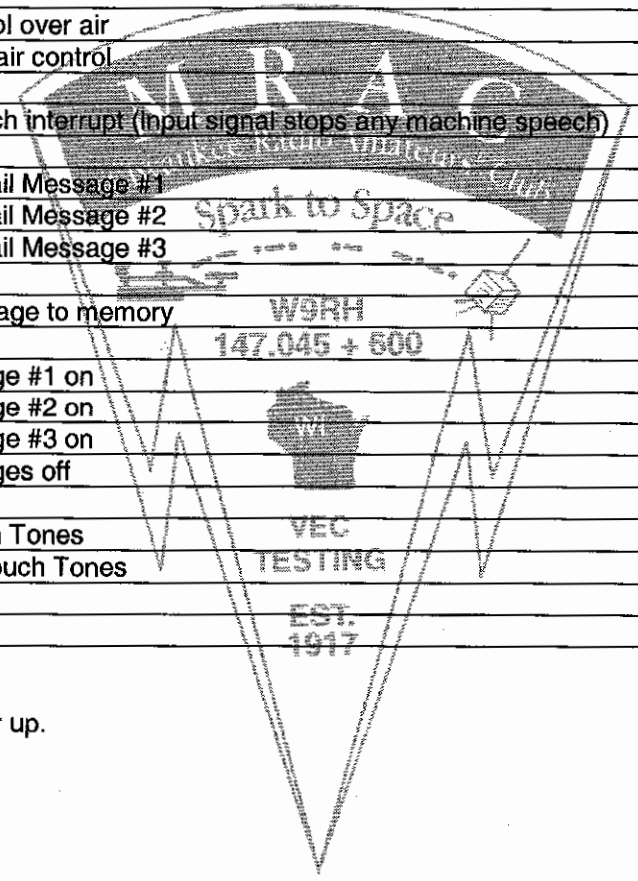
Basic command code prefix: 3822 (for basic programming)

All telephone commands must be terminated with #.

Macro #1 automatically executed when controller reset (or power up).

Popular (or important commands – command code prefix + command code - and their responses)		
Command code	**Description**	**Controller response**
00	Turn on transmitter	RE

01	Turn off transmitter (receiver stays active)	RD
02	Activate regular timer	TE
04	Activate long timer	TL
06	Clear a timeout	TC
1	Execute macro 1	M1
2	Execute macro 2	M2
3	Execute macro 3	M3
4	Execute macro 4	M4
5	Execute macro 5	M5
10	Turn PL access on	PL
07	Turn carrier access on	CA
11	Allow control over air	CE
12	Disable on air control	CD
39	Allow speech interrupt (input signal stops any machine speech)	SI
*1107	Program Tail Message #1	T1
*1108	Program Tail Message #2	T2
*1109	Program Tail Message #3	T3
*0	Write message to memory	Write
35	Tail message #1 on	T1
36	Tail message #2 on	T2
37	Tail message #3 on	T3
38	Tail messages off	TF
63	Mute Touch Tones	TM
64	Un-Mute Touch Tones	TU



Macro #1 is executed on power up.

Pending ID #1:
Pending ID #2:
Pending ID #3:
Special ID:

Tail Message #1: time announcement
Tail Message #2: "Meeting 7PM Thursday"
Tail Message #3: "Net Friday 9PM"
Tail messages are transmitted occasionally before the repeater drops carrier. Only one message (or none) can be activated at a time.

All messages are up for grabs. This includes, IDs, tail messages, whatever. Anybody with good ideas, have at it.

Codes for some common announcements you may wish to program are:
Club Meeting This Thursday - *926 35 *451 *453
Club Meeting Tonight - *926 35 45
Meeting 7 PM Thursday – 35 07 *358 *453
Net Tonight 9 PM – 25 45 09 *358

Net Friday 9 PM – 25 *237 09 *358
Code Practice 7:30 Wednesday – 75 85 07 13 60 *484
Code Practice 7:30 Tonight – 75 85 07 13 60 45

To program a tail message (for an example program tail message #3) for "Club Meeting This Thursday":
UNLOCK the controller – enter unlock code – controller responds with "UL"
SELECT TAIL MESSAGE (voice) TO PROGRAM - *1109 – controller responds with "T3"
Enter message codes - *926 35 *451 *453 – controller responds with spoken phrase
Enter code to write message to memory - *0 – controller responds with "WRITE UL"
LOCK the controller – enter lock code - ## - controller responds with "L-O-C-K"
Activate Tail Message #3 – command code prefix followed by 37 – controller responds with "T3"
DON'T FORGET THE POUND SIGN (#) TO END A COMMAND OVER THE TELEPHONE
To repeat the above example without the words (assuming telephone control):
4930017824#
*1109#
*926 35 *451 *453#
*0#
##
382237#
(hang up)

Setting time, date, etc, (all with controller unlocked)
Time - *4100 0(am) or 1(pm) HHMM
Date - *4101 MMDDYY
Day of week - *4102 1-7 (1=Monday, 2=Tuesday, etc)

More info to come…